

SUBCHAPTER A : GENERAL PROVISIONS
§§210.1-210.9

§210.1. Applicability.

This chapter applies to the reclaimed water producer, provider, and user. If the entity which is the producer of the reclaimed water is the same as the user, then the use of reclaimed water is permissible only if the use occurs after the wastewater has been treated in accordance with the producer's wastewater permit and the permit provides for an alternative means of disposal during times when there is no demand for the use of the reclaimed water. This chapter does not apply to treatment or disposal of wastewater permitted by the commission in accordance with the requirements of Chapter 305 of this title (relating to Consolidated Permits), or to the user of such treated wastewater identified in the producer's wastewater discharge permit authorizing disposal by irrigation. This chapter does not apply to those systems authorized under Chapter 285 of this title (relating to On-Site Wastewater Treatment) which utilizes surface irrigation as an approved disposal method.

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§210.2. Purpose and Scope.

(a) The purpose of this chapter is to establish general requirements, quality criteria, design, and operational requirements for the beneficial use of reclaimed water which may be substituted for potable water and/or raw water. As defined and specified in this chapter, the requirements must be met by producers, providers, and/or users of reclaimed water. Specific use categories are defined with corresponding reclaimed water quality requirements. These criteria are intended to allow the safe utilization of reclaimed water for conservation of surface and ground water; to ensure the protection of public health; to protect ground and surface waters; and to help ensure an adequate supply of water resources for present and future needs.

(b) The commission has defined other types of reclaimed water activity in separate regulations, including §309.20 of this title (relating to Land Disposal of Sewage Effluent) and §297.1 of this title (relating to Definitions). These regulations do not modify those definitions. The term reclaimed water is limited in scope for the purpose of this rule as defined in §210.3 of this title (relating to Definitions).

(c) Approval by the executive director of a reclaimed water use project under this chapter does not affect any existing water rights. If applicable, a reclaimed water use authorization in no way affects the need of a producer, provider and/or user to obtain a separate water right authorization from the commission.

(d) Reclaimed water projects approved under this chapter do not require a new or amended waste discharge permit from the commission except as provided in §210.5 of this title (relating to Permits Required). Persons who desire to develop projects not specifically authorized by this chapter may seek authorization pursuant to provisions of Subchapter D or apply for a new or amended waste discharge permit under Chapter 305 of this title (relating to Consolidated Permits).

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§210.3. Definitions.

The following words and terms when used in this chapter shall have the following meanings unless the context clearly indicates otherwise.

Beneficial use - An economic use of wastewater in accordance with the purposes, applicable requirements, and quality criteria of this chapter, and which takes the place of potable and/or raw water that could otherwise be needed from another source. The use of reclaimed water in a quantity either less than or the economically optimal amount may be considered a beneficial use as long as it does not constitute a nuisance.

BOD₅ - Five-day biochemical oxygen demand.

CBOD₅ - Five-day carbonaceous biochemical oxygen demand.

CFU - Colony forming units.

Domestic wastewater - Waste and wastewater from humans or household operations that are discharged to a wastewater collection system or otherwise enters a treatment works. Also, this includes waterborne human waste and waste from domestic activities such as washing, bathing, and food preparation, including greywater and blackwater, that is disposed in an on-site wastewater system as defined in Chapter 285 of this title (relating to On-Site Wastewater Treatment).

DRASTIC - A classification system for comparing land units on the basis of their vulnerability to ground-water pollution, a detailed description of which is found in Appendix 1 of this chapter. Figure 1: 30 TAC §210.3

Edwards Aquifer - That portion of an arcuate belt of porous, water bearing, predominantly carbonate rocks known as the Edwards and Associated Limestones in the Balcones Fault Zone trending from west to east to northeast in Kinney, Uvalde, Medina, Bexar, Comal, Hays, Travis, and Williamson counties; and composed of the Salmon Peak Limestone, McKnight Formation, West Nueces Formation, Devil's River Limestone, Person Formation, Kainer Formation, Edwards Formation, and Georgetown Formation. The permeable aquifer units generally overlie the less-permeable Glen Rose Formation to the south, overlie the less-permeable Comanche Peak and Walnut formations north of the Colorado River, and underlie the less-permeable Del Rio Clay regionally. (See Chapter 213 of this title (relating to Edwards Aquifer).)

Edwards Aquifer Recharge zone - Generally, that area where the stratigraphic units constituting the Edwards Aquifer crop out, and including the outcrops of other geologic formations in proximity to the Edwards Aquifer, where caves, sinkholes, faults, fractures, or other permeable features would create a potential for recharge of surface waters into the Edwards Aquifer. The recharge zone is identified as that area designated as such on official maps located in the offices of the commission and the Edwards Underground Water District. (See Chapter 213 of this title (related to Edwards Aquifer).)

Food crop - Any crops intended for direct human consumption.

Initial holding pond - An impoundment which first receives reclaimed water from a producer at the quality levels established by this chapter, not including subsequent holding ponds.

Geometric mean - The n^{th} root of the product of all measurements made in a particular period of time, for example in a month's time, where n equals the number of measurements made. In the alternative, the geometric mean can also be computed as the antilogarithm of the sum of the logarithm of each measurement made. Where any measurement using either computation method equals zero, it must be substituted with the value of one.

l - Liter.

Landscape impoundment - Body of reclaimed water which is used for aesthetic enjoyment or which otherwise serves a function not intended to include contact recreation.

Leak detection system - A system or device designed, constructed, maintained, and operated with a pond that is capable of immediately detecting a release of leachate or reclaimed water that migrates through a liner. The system may typically include a leachate collection system along with either leak detection sensors or view ports.

Municipal wastewater - Waste or wastewater discharged into a publicly owned or a privately owned sewerage treatment works primarily consisting of domestic waste.

mg/l - Milligram per liter.

NTU - Nephelometric turbidity units.

Nuisance - Any distribution, storage, or use of reclaimed water, in such concentration and of such duration that is or may tend to be injurious to or which adversely affects human health or welfare, animal life, vegetation, or property, or which interferes with the normal use and enjoyment of animal life, vegetation, or property.

On-channel pond - An impoundment wholly or partially within a definite channel of a stream in which water flows within a defined bed and banks, originating from a definite source or sources. The water may flow continuously or intermittently, and if intermittently, with some degree of regularity, dependent on the characteristics of the source or sources.

Permit or permitted - A written document issued by the commission or executive director in accordance with Chapter 305 of this title (relating to Consolidated Permits) which, by its conditions, may authorize the permittee to construct, install, modify, or operate, in accordance with stated limitations, a specified facility for waste discharge, including a wastewater discharge permit.

Pond system - Wastewater facility in which primary treatment followed by stabilization ponds are used for secondary treatment and in which the ponds have been designed and constructed in accordance with applicable design criteria. (See Chapter 317 of this title (relating to the Design Criteria for Sewerage Systems).)

Producer - A person or entity that produces reclaimed water by treating domestic wastewater or municipal wastewater, in accordance with a permit or other authorization of the Agency, to meet the quality criteria established in this chapter.

Provider - A person or entity that distributes reclaimed water to a user(s) of reclaimed water. For purposes of this chapter, the reclaimed water provider may also be a reclaimed water producer.

Reclaimed water - Domestic or municipal wastewater which has been treated to a quality suitable for a beneficial use, pursuant to the provisions of this chapter and other applicable rules and permits.

Restricted landscaped area - Land which has vegetative cover to which public access is controlled in some manner. Access may be controlled by either legal means (e.g. state or city ordinance) or controlled by some type of physical barrier (e.g., fence or wall). Example of such areas are: golf courses; cemeteries; roadway rights-of-way; median dividers.

Restricted recreational impoundment - Body of reclaimed water in which recreation is limited to fishing, boating and other non-contract recreational activities.

Single grab sample - An individual sample collected in less than 15 minutes.

Spray irrigation - Application of finely divided water droplets using artificial means.

Subsequent holding pond - A pond or impoundment which receives reclaimed water from an initial holding pond where the quality of the water changes after management in the initial holding pond, due to factors which may include:

(A) the addition of water occurs such as contributions from surface water or ground water sources, but not including contributions of reclaimed water, domestic wastewater, or municipal wastewater;

(B) some type of utilization of the reclaimed water for a beneficial use occurs; or

(C) commingling of reclaimed water with surface water runoff where it occurs between storage in an initial holding pond and the subsequent holding pond.

Surface irrigation - Application of water by means other than spraying so that contact between the edible portion of any food crop and the irrigation water is prevented.

Type I reclaimed water use - Use of reclaimed water where contact between humans and the reclaimed water is likely.

Type II reclaimed water use - Use of reclaimed water where contact between humans and the reclaimed water is unlikely.

Unrestricted landscaped area - Land which has had its plant cover modified and access to which is uncontrolled. Examples of such areas are: parks; school yards; greenbelts; residences.

User - Person or entity utilizing reclaimed water for a beneficial use, in accordance with the requirements of this chapter. A reclaimed water user may also be a producer or a provider.

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§210.4. Notification.

(a) Before providing reclaimed water to another for a use allowable under this chapter, the reclaimed water provider shall notify the executive director and obtain written approval to provide the reclaimed water. The notification shall include:

(1) a description of the intended use of the reclaimed water, including quantity, quality, origin, and location and purpose of intended use;

(2) a clear indication of the means for compliance with this chapter, including documentation that a user will be apprised of their responsibilities under this chapter as a part of the water supply contract or other binding agreement;

(3) evidence in a water supply contract or other binding agreement of the provider's authority to terminate reclaimed water use that is noncompliant with this chapter; and

(4) an operation and maintenance plan that is required under ordinance or is to be a part of the water supply contract or other binding agreement, where applicable, and which shall contain, as a minimum, the following:

(A) a labeling and separation plan for the prevention of cross connections between reclaimed water distribution lines and potable water lines;

(B) the measures that will prevent unauthorized access to reclaimed water facilities (eg., secured valves);

- (C) procedures for monitoring reclaimed water transfers and use;
- (D) steps the user must utilize to minimize the risk of inadvertent human exposure;
- (E) schedules for routine maintenance;
- (F) a plan for carrying out provider employee training and safety relating to reclaimed water treatment, distribution, and management; and
- (G) contingency plan for remedy of system failures, unauthorized discharges, or upsets.

(b) If the provider is not the producer, a description of the origin of the reclaimed water, its quality based upon the parameters contained in the underlying waste discharge permit(s), and a signed agreement from the producer authorizing the transfer of the reclaimed water to the provider. If applicable, a reclaimed water provider or user may need to obtain a separate water right authorization from the commission.

(c) A producer who chooses to use reclaimed water for a beneficial use only within the boundaries of a wastewater treatment facility permitted by the commission, may do so without notification otherwise required by this section. In such instances, the producer is still required to comply with all applicable requirements of this chapter pertaining to the reclaimed water use.

(d) If effluent is to be used for irrigation within the Edwards Aquifer recharge zone, plans and specifications for the disposal system must be submitted to the executive director for review and approval prior to construction of the facility in accordance with Chapter 213 of this title (relating to Edwards Aquifer).

(e) Major changes from a prior notification for use of reclaimed water must be approved by the executive director. A major change includes:

- (1) a change in the boundary of the approved service area not including the conversion of individual lots within a subdivision to reclaimed water use;
- (2) the addition of a new producer;
- (3) major changes in the intended use, such as conversion from irrigation of a golf course to residential irrigation; or
- (4) changes from either Type I or Type II uses to the other.

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§210.5. Authorization For The Use of Reclaimed Water.

(a) Prior to discharging any reclaimed water to the waters in the state, the provider or user shall obtain a permit from the commission in accordance with the requirements of Chapter 305 of this title

(relating to Consolidated Permits) except as provided for by §210.22(g) of this title (relating to General Requirements).

(b) The executive director may require a reclaimed water user to apply for and obtain a permit to utilize reclaimed water if the reclaimed water use poses potential or actual adverse impacts upon human health, soil and ground water resources, or aquatic life.

(c) For purposes of this chapter, no permit issued pursuant to Chapter 305 of this title (relating to Consolidated Permits) will be required for additional treatment required to meet the quality standards of §210.33 of this title (relating to Quality Standards for Using Reclaimed Water), unless such additional treatment results in a discharge of wastewater into waters in the state.

(d) A reclaimed water provider or user who accepts effluent meeting the Type II quality criteria and that must also meet the Type I quality criteria for a proposed use must provide additional treatment for the proposed new use. The additional manner of treatment must be authorized by the executive director. The provider or user must notify and be granted an authorization from the executive director prior to engaging in such activity. Examples of such additional treatment may include processes for disinfection or filtration of the reclaimed water. Such authorization may be granted by the executive director after review of the proposed plans and specifications submitted to the executive director for the additional treatment. This request for authorization may be submitted to the executive director along with the notification required by §210.4 of this title (relating to Notification).

(e) If a provider or user elects to treat reclaimed water supplied by the provider or producer, respectively, to a quality better than the minimum standards of this chapter for the same use, such treatment does not require a permit or other additional authorization by the executive director.

(f) Any sewage sludge generated as a result of reclaimed water treatment undertaken pursuant to this section shall be managed in accordance with the requirements of Chapter 312 of this title (relating to Sludge Use, Disposal and Transportation).

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§210.6. Responsibilities.

The producer of reclaimed water will not be liable for misapplication of reclaimed water by users, except as provided in this section. Both the reclaimed water provider and user have, but are not limited to, the following responsibilities:

(1) The reclaimed water producer shall:

(A) transfer reclaimed water of at least the minimum quality required by this chapter at the point of delivery to the user for the specified use;

(B) sample and analyze the reclaimed water and report such analyses in accordance with §210.34 and §210.36(b) of this title (relating to Sampling and Analysis and Record keeping and Reporting, respectively); and

(C) notify the executive director in writing within five (5) days of obtaining knowledge of reclaimed water use not authorized by the executive director's reclaimed water use approval.

(2) The reclaimed water provider shall:

(A) assure construction of reclaimed water distribution lines or systems in accordance with this chapter and in accordance with §210.25 of this title (relating to Special Design Criteria for Reclaimed Water Systems);

(B) transfer reclaimed water of at least the minimum quality required by this chapter at the point of delivery to the user for the specified use;

(C) notify the executive director in writing within five (5) days of obtaining knowledge of reclaimed water use not authorized by the executive director's reclaimed water use approval; and

(D) not be found in violation of this chapter for the misuse of the reclaimed water by the user if transfer of such water is shut off promptly upon knowledge of misuse regardless of contract provisions.

(3) The reclaimed water user shall:

(A) use the reclaimed water in accordance with this chapter; and

(B) maintain and provide records as required by §210.36(a) of this title (relating to Recordkeeping and Reporting).

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§210.7. Transfer and Conveyance of Reclaimed Water.

Reclaimed water transferred from a provider to a user shall be done on a demand only basis in order that the water is not provided during times it cannot be beneficially used in accordance with this chapter. The reclaimed water user may refuse delivery of such water at any time. However, this section is not intended to change any obligation the user may have by contract or ordinance. All reclaimed water transferred to a user must be of at least the treatment quality for the use specified in §210.32 of this title (relating to Specific Uses of Reclaimed Water).

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§210.8. Restrictions.

This chapter does not convey or alter any property right and does not grant any exclusive privilege.

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§210.9. Enforcement.

If a person or entity fails to comply with the terms of this chapter, the executive director may require the entity to apply for and obtain a permit or permit amendment. The commission may also issue an enforcement order requiring remedial measures and the assessment of administrative penalties pursuant to §26.019 and §26.136 of the Texas Water Code. The commission may also seek civil penalties and injunctive relief in a court of competent jurisdiction as provided by §26.123 of the Texas Water Code.

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Figure 1: 30 TAC §210.3

APPENDIX 1

DRASTIC - An Approach to Ground-Water Pollution Potential Mapping

DRASTIC was developed as a tool for comparing land units on the basis of their vulnerability to ground-water pollution. Artificial classification of natural systems, including aquifers, has been used for years. A system for ranking ground-water pollution potential which took into consideration a relatively large number of parameters had not been developed, however. Through a consensus process, a group sponsored by the National Water Well Association and the Robert S. Kerr Environmental Research Laboratory developed the methodology described in limited detail here.

DRASTIC is a systematic approach for assessing the ground-water pollution potential of hydrogeologic settings. The DRASTIC system is a methodology which involves delineation of hydrogeologic settings and data analysis to develop a single index number which represents the sensitivity of that setting to ground-water pollution potential. The system to some degree depends on subjective, but skilled judgement by the user (Texas Water Commission, 1989).

Hydrogeologic settings are delineated based on seven parameters which are used to develop an index number for each setting. The parameters have been organized to create the acronym DRASTIC.

DRASTIC stands for:

- D - Depth to water
- R - Annual recharge
- A - Aquifer media
- S - Soil media
- T - Topography
- I - Vadose zone impact
- C - Hydraulic conductivity

After index numbers are developed, maps can be constructed to present a graphic display of the pollution potential. Two maps can be generated using the DRASTIC methodology, a map depicting general vulnerability to ground-water pollution and another specifically aimed at pollution from certain agricultural practices.

A generic contaminant is used for this methodology. The contaminant is introduced at the land surface as a solid or liquid and travels to the aquifer with recharge waters derived from precipitation. Mobility of the contaminant is assumed to be equal to that of groundwater and attenuation processes are assumed to go on in the soil, Vadose zone and aquifer.

Parameters used in the DRASTIC system are divided into ranges with corresponding ratings. Rating values depend on the impact of the factor on contamination potential. The general and agricultural DRASTIC evaluations use the same ranges and rating values, but the weighting of parameters changes. Weighting represents an attempt to define the relative importance of each factor in its ability to affect pollution transport to and within the aquifer and it creates the differences between the general and agricultural indices (Texas Water Commission, 1989).

Two pollution potential numbers, one for generalized pollution sources and one for pollution due to agricultural activities, are derived for each hydrogeologic setting. The formula for the index number is:

$$I = (Dr \times Dw) + (Rr \times Rw) + (Ar \times Aw) + (Sr \times Sw) + (Tr \times Tw) + (Ir \times Iw) + (Cr \times Cw)$$

I = DRASTIC index number
D, R, A, S, T, I, C - parameters
r - rating
w - weight

Maps are labeled with designations for the hydrogeologic settings and pollution potential numbers and the indices are then divided into ranges for color coding of the final maps.

More detailed information may be found in *DRASTIC: A standardized system for evaluating ground water pollution potential using hydrogeologic settings*: U.S. Environmental Protection Agency, EPA/600/2-87/035, authored by L. Allen, T. Bennett, J. H. Lehr, R. J. Petty and G. Hackett.